

Remarks

Claims 16, 21, 23 and 28 are amended. Claims 16 to 28 are pending in this application of which claims 16 and 23 are in independent form.

Claims 16 to 22 were rejected under 35 USC 112, first paragraph, as failing to comply with the written description requirement. In this connection, specific reference is made to the phrase "electronic image data", specifically, the last clause of claim 16 is referred to:

"said recording device including an image mixer for receiving both said image data and said image of said object as electronic image data and for mixing said electronic image data therein."

Referring to FIG. 6, element 311 is an LCD device and corresponds to element 11 in FIG. 1 and element 325 is a CCD chip and corresponds to element 25 in FIG. 1. On page 6, lines 21 and 22, of their disclosure, the applicants note that:

"The image display unit 11 is configured as an LCD and the image sensor 25 is configured as a CCD chip."

Applicants respectfully submit that a person of ordinary skill in the art to which the applicants' invention pertains would know what an LCD device is and that an LCD device is supplied with electronic image data to produce an optical image and that a CCD chip must perforce emit electronic image data of the image received at its optical end.

Turning now to FIG. 6, it can be seen that the electronic

image data 309 is supplied to the LCD device 311 where it is displayed. From the circuit in FIG. 6, it can be seen that the electronic image data 309 is also supplied to the mixer 340. Applicants submit that a person of ordinary skill would realize that the image data 309 is in the form of electronic image data and that the mixer 340 would receive the image data as electronic image data for the purpose of mixing. The CCD chip 325 also transmits image data in electronic form to the mixer where it is mixed as set forth in the last clause of applicants' claim 16.

Applicants believe that the foregoing is well described starting on page 7, line 29, and continuing to page 8, line 7, as follows:

"The image recording module 327 of the surgical microscope 301 includes an image mixer 340 which mixes the image data 309 displayed by the image projection module 307 and the image detected by the image sensor 325.

In the surgical microscope 301, the external image data 309 and the image of the object 305 can be combined by the mixer 340 in a suitable way and be made available via image display unit 311 to the primary and/or associate viewer."

Thus, the specification together with the drawings describes the claimed invention in sufficient detail that one skilled in the art could reasonably conclude that the inventor had possession of the claimed invention at the time the application was filed (MPEP §2163). Applicants further note that the subject matter of a claim need not be described literally (that is, using the same terms or *in haec verba*) in order for the disclosure to satisfy the description requirement (MPEP §2163.02). Also,

information which is well known in the art need not be described in detail in the specification. Thus, it is not necessary for the applicants to describe in detail an LCD device or a CCD chip as our person of ordinary skill would know what these devices are and how they operate. Generally, there is an inverse correlation between the level of skill and knowledge in the art and the specificity of the disclosure necessary to satisfy the written description requirement (MPEP §2163 II.2).

In view of the above, applicants submit that they are in compliance with the requirements of 35 USC 112, first paragraph, when their specification and drawings are considered as a whole.

Claims 23 and 26 were rejected under 35 USC 102(b) as being anticipated by Pensel et al. The following will show that claim 23, as amended, patentably distinguishes the applicants' invention over this reference.

In the action, the suggestion is made that the device 24 is provided for synchronizing the illumination of the image display unit with the image sensor and specific reference is made to column 5, lines 60 to 65. Applicants have studied this passage and all of Pensel et al and have not uncovered any reference to the synchronization of the illumination of the image project module with the image sensor. Indeed, the word "synchronizing" is nowhere mentioned in Pensel et al.

The foregoing notwithstanding, applicants have amended claim 23 herein to recite that the synchronizing is to avoid flickering as set forth in the last clause of claim 23:

"a device for synchronizing the illumination of said image display unit with said image sensor to avoid

flickering." (emphasis added)

The antecedent basis for this feature and limitation can be found in the applicants' disclosure, for example, at page 6, lines 28 to 30.

In view of the above, claim 23 should now patentably distinguish the applicants' invention over Pensel et al and be allowable. Claims 24 to 28 are all dependent, directly or indirectly, from claim 23 so that they too should now be allowable.

Claims 24, 25 and 27 were rejected under 35 USC 103(a) as being unpatentable over Pensel et al in view of Mercado.

The deficiency of Pensel et al is set forth above and Mercado does not fill the void left thereby. Mercado is directed to a projection objective for semiconductor lithography. On page 5 of the action, it is noted that:

"...It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the projection lens assembly of Mercado in the system of Pensel et al. to provide enhanced aberration correction (Mercado, column 3, line 6)."

However, this is most impractical and unlikely since an objective for semiconductor lithography usually has a weight of approximately one-half ton so that it would hardly be incorporated into a surgical microscope.

Claim 16 was rejected under 35 USC 103(a) as being unpatentable over Pensel et al in view of Müller et al.

In Pensel et al, a surgical microscope is described with reference to FIG. 1 wherein a video recorder 19 and a video

camera 26 are provided. However, Pensel et al does not disclose whether with this "recording module" detects only the image of the viewing region in the surgical microscope or whether also image information is taken up thereby wherein the image of the viewing region is superposed with the image generated by a display.

With respect to the Müller et al, the view is expressed in the action that reference numerals 19 and 26 disclose an image recording module. Applicants respectfully disagree and note that Müller et al is directed to a surgical microscope which makes possible the position determination of an object detail in the viewing field of the microscope. In FIG. 2 of Müller et al, it is true that the surgical microscope has a position resolving detector 23 with which the position of a laser beam, which is reflected on the object surface, can be detected (see column 5, line 49, to column 6, line 2). The position detector 23 is, however, a CCD-line array, a CCD-surface array or a position sensitive detector. Accordingly, the component 23 is not an image sensor.

This is not a contradiction of the analysis presented in the action since this analysis makes reference to component assemblies 34 and 16 in Müller et al and indicates that these would form an image recording module.

However, applicants respectfully disagree with this analysis and note that column 5, line 48, identifies reference numeral 34 in FIG. 2 of Müller et al as a displacement element and the component assembly 16 is a detector for determining the actual optical system data which detects the actual setting of the zoom

system.

No image mixing takes place in the process control unit 3 in Müller et al (see column 4, line 64). Accordingly, Müller et al cannot render obvious for a person of ordinary skill to electronically mix an image, which is coupled out of the surgical microscope and supplied to an image sensor, and the image display of an image reflected into the surgical microscope. More specifically, there is no suggestion in the combination of Pensel et al and Müller et al which could enable our person of ordinary skill to arrive at the feature and limitation of claim 16 of:

"said recording device including an image mixer for receiving both said image data and said image of said object as electronic image data and for mixing said electronic image data therein."

For the reasons advanced above, applicants submit that claim 16 patentably distinguishes their invention over the combination of Pensel et al and Müller et al and should now be allowable. Claims 17 to 22 are all dependent directly or indirectly from claim 16 so that they too should now be allowable.

Reconsideration of the application is earnestly solicited.

Respectfully submitted,



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